1998 Annual Compliance Report for Indiana Public Water Supply Systems

IDEM Drinking Water Branch **June 1999**

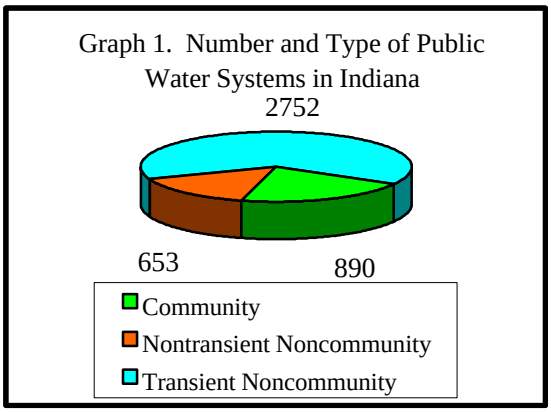
Introduction

The 1996 Amendments to the Safe Drinking Water Act require each state to prepare an annual report of violations of the national primary drinking water regulations for public water supplies. The annual reports are intended to provide a summary of violations of maximum contaminant levels (MCL's), treatment techniques, variances and exemptions[1], and monitoring and reporting violations (M&R). This report is the third annual report for the State of Indiana and includes information for the time period January 1, 1998 through December 31, 1998.

Public Water Supply Information

There are approximately 4,295 active public water supplies in Indiana. Graph 1 shows the distribution of public water systems by the system type. Drinking water in Indiana comes from ground water sources via wells or surface water systems such as lakes and rivers. Some public water systems purchase water from other public water supplies and distribute the water to their customers. Ninety-six percent (96%) of all public water systems are served by ground water. However, only fifty-two percent (52*%)* of the total population is served by systems utilizing ground water.

Graph 1. Number and Type of Public Water Systems in Indiana



[1] IDEM did not issue any variances or exemptions in 1998, therefore there are no violations for variances and exemptions to address in this summary report.

Drinking Water Monitoring Requirements

The Safe Drinking Water Act and the Indiana Public Water Supply Supervision Program mandate the monitoring and reporting of various bacteriological and chemical contaminants that may be found in drinking water. The contaminants are categorized as total coliform, nitrate (NO_3), inorganic chemicals (IOCs), volatile organic compounds (VOCs), synthetic organic compounds (SOCs), radionuclides (Rads), lead and copper (Pb/Cu), and total trihalomethanes (TTHMs). The levels of these contaminants in drinking water are compared to maximum contaminant levels (MCLs) which are set by the Environmental Protection Agency (EPA) and the State, to ensure that water is safe for human consumption. See Table 2 on the back page for a list of MCLs and action levels for all of the regulated contaminants.

Surface water systems and systems that have exceeded an action level for lead or copper are required to properly treat their water to control the levels of such contaminants as bacteria, viruses, parasitic microorganisms, lead, or copper. Treatment technique (TT) violations are assigned to systems that do not meet this requirement.

Violation Summary

Table 1 provides a summary of the number of MCL, M&R, and TT violations for all of the regulated drinking water contaminants for the 1998 calendar year (January 1, 1998-December 31, 1998). The table also provides a summary of the number of systems in violation for each contaminant group. Every effort has been made to tabulate the total number of systems in violation without double counting a system if it has more than one violation across contaminant groups.

An evaluation of the data from the 1996 and 1997 Annual Compliance Reports, in conjunction with the data for this report, shows a consistency in compliance rates for MCL, M&R, and TT violations. Approximately thirty-seven percent (37%) of the total number of active water systems have monitoring and reporting violations for at least one contaminant.

Table 1. 1998 Violations Summary for Indiana Public Water Supplies							
		MCL		Treatment Technique		Monitoring & Reporting	
		Violations	Systems in Violation	Violations	Systems in Violation	Violations	Systems in Violation
Pb/Cu	CWS			0	0	27	22
	NTNC			0	0	21	18
SWTR	CWS			3	3	0	0
	NTNC			1	1	0	0
	TNC			1	1	1	1
VOC	CWS	1	1			127	67
	NTNC	1	1			63	48
IOC	CWS	12	1			9	8
	NTNC	0	0			4	4
SOC	CWS	2	2			172	89
	NTNC	0	0			89	54
NO3	CWS	13	5			70	56
	NTNC	1	1			31	29
	TNC	10	9			541	538
TCR	CWS	50	45			271	144
	NTNC	46	40			106	87
	TNC	178	164			2236	1186
TTHM	CWS	0	0			1	1
	NTNC	0	0			0	0
Rads	CWS	12	2			11	6
Totals	CWS	90	55	3	3	688	148
	NTNC	48	42	1	1	314	143
	TNC	188	172	1	1	2778	1264

Total Number of Systems in Violation	CWS	170
	NTNC	176
	TNC	1367
	Total	1713

LEGEND

MCL=Maximum Contaminant Level Violation
Pb/Cu=Lead and Copper
IOC=Inorganic Chemicals
TCR=Total Coliform Rule
CWS=Community Water System
SWTR=Surface Water Treatment Rule
SOC=Synthetic Organic Compounds
TTHM=Total Trihalomethanes
NTNC=Nontransient Noncommunity Water System
VOC=Volatile Organic Compounds
NO3=Nitrate
Rads=Radionuclides
TNC=Transient Noncommunity Water System

The majority of these systems (approximately 81%) are transient public water supplies. The percentage of systems with maximum contaminant level violations has remained consistent at approximately six percent (6%) over the past three years, while the number of systems with treatment technique violations has also remained constant over the past three years.

Compliance Assistance Efforts

The Drinking Water Branch currently assists public water supply owners and operators to promote compliance with the drinking water regulations. Assistance is provided through site visits, correspondence, telephone contact, and educational presentations and materials. The following is a summary of the number of site visits that were conducted in 1998 by the Drinking Water Branch staff:

Sanitary Surveys	**553**
Vulnerability Assessments	**613**
Well Site Surveys	**85**
Technical Assistance Visits	**603**
MCL Follow-Up Visits	**352**

The focus of the compliance assistance efforts has been primarily directed to community and nontransient noncommunity public water supplies. There are some additional funds available from the federal government that can be specifically utilized to provide technical assistance for small public water systems. In 1998, the State developed a plan to utilize these funds to assist small systems and submitted the plan to the EPA for approval. The State will begin implementation of the plan in 1999, which will provide additional specialized assistance for small systems. The objective of the plan is to provide additional guidance, information, and on-site assistance to small systems to improve compliance and promote a better understanding of the drinking water regulations.

Consumer Confidence Reports

Specific information pertaining to your local water supply may be obtained by contacting your local public water supplier. The Safe Drinking Water Act requires community public water supplies to assemble and distribute a consumer confidence report to customers with information regarding the quality of the drinking water being served. This is the first year that public water supplies are required to develop consumer confidence reports. The first annual report must be completed by October 19, 1999 and contain information from data collected in 1998.

For More Information

If you have any questions concerning this report or would like the lists of public water supplies that have had violations in 1998, please contact the Drinking Water Branch at (317) 308-3280.

Additional copies of this report are available on the Indiana Department of Environmental Management, Office of Water Management, Drinking Water Branch web-site at http://www.state.in.us/idem/owm/dwb/index.html or by contacting the Drinking Water Branch at (317) 308-3280.

For more information regarding all aspects of the environment in Indiana, IDEM publishes an annual State of the Environment Report. Copies of the report are available via the internet at http://www.state.in.us/idem/soe/index.html, or by calling (800) 451-6027 ext. 3-1044.

TABLE 2
REGULATED CHEMICAL DRINKING WATER CONTAMINANTS
MAXIMUM CONTAMINANT LEVELS

Contaminant	MCL	Contaminant	MCL	Contaminant	MCL
Inorganic Chemicals (IOCs)	**mg/l**	**Volatile Organic Compounds (VOCs)**	**ug/l**	**Synthetic Organic Compounds (SOCs)**	**ug/l**
Antimony	0.006	1,1-Dichloroethylene	7	2,4-D	70
Arsenic	0.05	1,1,1-Trichloroethane	200	2,4,5-TP (Silvex)	50
Barium	2	1,1,2-Trichloroethane	5	Alachlor	2
Beryllium	0.004	1,2-Dichloroethane	5	Atrazine	3
Cadmium	0.005	1,2-Dichloropropane	5	Benzo(a)pyrene	0.2
Chromium	0.1	1,2,4-Trichlorobenzene	70	Carbofuran	40
Cyanide (free)	0.2	Benzene	5	Chlordane	2
Fluoride (Adjusted) *	2	Carbon Tetrachloride	5	Dalapon	200
Fluoride (Natural) *	4	Cis-1,2-Dichloroethylene	70	Di(2-ethylhexyl)adipate	400
Mercury	0.002	Dichloromethane	5	Di(2-ethylhexyl)phthalate	6
Nickel	---	Ethylbenzene	700	Dibromochloropropane (DBCP)	0.2
Selenium	0.05	Monochlorobenzene	100	Dinoseb	7
Thallium	0.002	o-Dichlorobenzene	600	Dioxin (2,3,7,8-TCDD)	3X10-5
		p-Dichlorobenzene	75	Diquat	20
Sodium *	No MCL	Styrene	100	Endothall	100
		Tetrachloroethylene	5	Endrin	2
Asbestos		Toluene	1000	Ethylene Dibromide (EDB)	0.05
Asbestos	7 MFL**	Trans-1,2-Dichloroethylene	100	Glyphosate	700
		Trichloroethylene	5	Heptachlor	0.4
Nitrate		Vinyl Chloride	2	Heptachlor epoxide	0.2
Nitrate	10	Xylenes (total)	10,000	Hexachlorobenzene	1
Nitrite	1			Hexachlorocyclopentadiene	50
Total Nitrate & Nitrite	10			Lindane	0.2
		Total Trihalomethanes **** (for systems >10,000)	100	Methoxychlor	40
Lead & Copper				Oxamyl (Vydate)	200
Lead Action Level	0.015			PCBs	0.5
Copper Action Level	1.3			Pentachlorophenol	1
				Picloram	500
Radionuclides *	**pCi/l**			Simazine	4
Gross Alpha	15			Toxaphene	3
Gross Alpha Action Level	5				
Radium-226 Action Level	3				
Radium-226 & Radium-228 (combined)	5				
Manmade	***				

* Community Water Systems Only
** MFL=million fibers/liter > 10 micron
*** The average annual concentration of beta particle and photon radioactivity from manmade radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirem per year.
**** The sum of the concentrations of bromodichlormethane, dibromochloromethane, tribromomethane (bromoform), and trichloromethane (chloroform).